ALIGNMENT:
TRCHEW90 (RAMP D6)

CURVE DATA
TRCHEW90-1
P.I. STA 806+09.351629
$R = 120'$
$u_d = 20$ MPH
from AASHTO Pg 148, $e_{max} = 5.6\%$

$G_{20} = 135:1$
$w = 9.5'$
divided roadway ($b_w = 1$)
normal crown = 1.6%

P.C. IS A S.C.
S.C. STA 803+36.335831
$L_{SPIRAL} = 198'$

$\Delta = 0.056 + 0.016 = 0.040$

$$G = \frac{L}{\Delta * w * b_w}$$

$$G = \frac{198}{(0.04)(9.5)(1)} = 521.05$$

$521.05 > 135$
SPIRAL OK FOR 20 MPH

CROSS SLOPE @ STA 802+89.038328
TS STA 801+38.335831

802+89.038328
− 801+38.335831
150.702497'

$\Delta = 0.04$

$$\frac{150.702497}{198} = \frac{x}{0.04}$$

$x = 0.0304495$

cross slope = $x + 0.016 = 0.04644$

**BURGESS & NIPLE COMPUTATION SHEET**

JOB NO. PID 25795 JOB NAME CIB - TRENCH SHEET 1 OF 2 SHEETS
SUBJECT RAMP D6 - CURVE 1 PREPARED BY DCL DATE 01/27/10
SCALE _____ CHECKED BY ACR DATE 2/1/10

P.T.

P.T. STA 806+13.938813

TO MAXIMIZE TIME AT NC, USE NC = 2%

$L = G * \Delta * w * b_w$

$G_{(25)} = 143:1$

$\Delta = (0.056 - 0.02) = 0.036$

$w = 24'$

$L = (143)(0.036)(24)(1) = 123.5520'$

ACHIEVE $^2/_3$ of $e_{max}$ @ P.T.

$^2/_3 (0.056) = 0.037333$

$(0.056 - 0.03733)(143)(24)(1) = 64.0640'$

BEGIN ROTATION

P.T. STA - 64.0640' →

806+13.938813
− 64.0640
805+49.874813

END ROTATION

BEGIN ROTATION STA + 123.5520' →

805+49.874813
+ 123.552000
806+73.426813

FS STA 805+49.874813

NC STA 806+73.426813

**BURGESS & NIPLE COMPUTATION SHEET**

JOB NO. PID 25795 JOB NAME CIB - TRENCH SHEET 2 OF 2 SHEETS

SUBJECT RAMP DC - CURVE 1 (CONTINUED) PREPARED BY DCL DATE 01/27/10

SCALE N/A CHECKED BY ALR DATE 2/1/10